



**UNITED STATES DEPARTMENT OF COMMERCE**  
**United States Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

N.G.

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/521,545 03/09/00 SWAN

D 9896.145.0

023552  
MERCHANT & GOULD  
P O BOX 2903  
MINNEAPOLIS MN 55402-0903

HM12/0615

EXAMINER

HSU, G

ART UNIT

PAPER NUMBER

1627

DATE MAILED:

7  
06/15/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
09/521,545

Applicant(s)

Swan et al.

Examiner

Grace Hsu

Art Unit

1627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE one MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Aug 31, 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claims 1-28 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some\* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

Art Unit: 1627

### DETAILED ACTION

***Please Note:*** In an effort to enhance communication with our customers and reduce processing time, Group 1627 is running a Fax Response Pilot for Written Restriction Requirements. A dedicated Fax machine is in place to receive your responses. The Fax number is (703) 305-3704. A Fax cover sheet is attached to this Office Action for your convenience. We encourage your participation in this Pilot program. If you have any questions or suggestions please contact Jyothsna Venkat, Ph.D., Supervisory Examiner at Jyothsna Venkat@uspto.gov or 703-308-2439. Thank you in advance for allowing us to enhance our customer service. Please limit the use of this dedicated Fax number to responses to Written Restrictions.

1. An Information Disclosure Statement and A Supplemental Information Disclosure Statement, respectively received 30, 2000 and August 23, 2000 and A Change of Address Document, received August 30, 2000, were entered respectively as Paper Nos. 4-6.

### ***Election/Restriction***

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
- I. Claims 1-10, drawn to a reagent composition, classified in different classes and subclasses, depending on different functional group substituents, components, etc.
  - II. Claim 11-20, drawn to a method for attaching a target molecule to the surface of a substrate, classified in different classes and subclasses, depending on different functional group substituents, components, etc.
  - III. Claims 21-24, drawn to an activated slide, classified in different classes and subclasses, depending on different functional group substituents, components, etc.
  - IV. Claims 25-28, drawn to a microarray, classified in different classes and subclasses, depending on different functional group substituents, components, etc.

Art Unit: 1627

3. The inventions are distinct, each from the other, because of the following reasons:

4. Groups I, III and IV represent separate and distinct inventions. Groups I, III and IV are drawn to different products, which include different compositions, such as those of Groups I & IV (comprised of a different composition of different materials or a collection of two or more compounds, etc., which have biological, therapeutic or some other functional uses) and/or a different product composition attached to a solid support material, such as a slide of Group III (comprised of a different composition of different materials or a collection of two or more compounds, etc., which have biological, therapeutic or some other functional uses attached to a solid support). Therefore, Groups I, III and Group IV have different issues regarding patentability and enablement and represent patentably distinct subject matter, which merits separate and burdensome searches.

5. Groups I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the reagent composition of Group I may be useful for different applications and in alternate methods other than the method of Group II.

6. Group II and Groups III & IV represent separate and distinct inventions. Group II is different than Groups III & IV in that Groups II is drawn to a method of attaching a target molecule (which are directed to different purposes, use different materials, recite different

Art Unit: 1627

method or process steps for the preparation of different products or lead to different final results), while Groups III and IV are drawn to different products, which include different compositions, such as those of Groups III & IV (comprised of a different composition of different materials or a collection of two or more compounds, etc., which have biological, therapeutic or some other functional uses, which may be attached to a solid support material. Therefore, Group I and Groups III & IV have different issues regarding patentability and enablement and represent patentably distinct subject matter, which merits separate and burdensome searches.

7. These inventions are distinct for the reasons above and have acquired a separate status in the art because of their recognized divergent subject matter and/or shown by their different classifications. While some of the aforementioned groups are classified under an identical class/sub-class, the corresponding non-patent literature search remains unaffected. Each of the identified groups may require different searches. For example, product and method groups require different searches. Therefore, restriction for examination purposes as indicated is proper.

#### *Election of Species*

8. This application contains claims directed to the following patentably distinct species of the claimed invention.

9. If applicants elect any one of **Groups I-IV**, applicants are required to elect:

[1] a single generic core chemical compound species; and

[2] a single compound species of the aforementioned generic core structure

Art Unit: 1627

as selected from each of the following patentably distinct species of the claimed invention:

- [a] polymeric backbone with one or more pendant epoxide groups (as in claim 1 and claim 10) as selected from one of the following:
  - [1] acrylics;
  - [2] vinyls;
  - [3] nylons;
  - [4] polyurethanes;
  - [5] polyethers; **and**
  - [6] pendant arylketones photoreactive groups; and
- [b] a polymer formed from any of monomeric species (as in any one of claims 2, 3 or 4 or claims 12, 13, or 14)

Each of the species identified above represents patentably distinct subject matter. In the instant case, those species each involve different structures and modes of action. Therefore, those species involve different patentability and enablement issues.

**For species election and/or search purposes, applicants should provide the chemical structure of each of the above-identified species, wherein each of the specific chemical formula substituents of those species are defined either by picture or by expressing the species in terms of the variables of the formula.**

Applicants are required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1, 11, 21 and 25 are generic.

Art Unit: 1627

10. If applicants elect the invention of **Group I**, applicants are required to further elect from the following patentably distinct **Species A** of the claimed invention:

<u>Species A</u>	<u>claim no.</u>	<u>A reagent composition according to claim 1, wherein the reagent comprises:</u>
(1)	claim 2	a polymer formed by the polymerization of one or more monomers selected from group as defined in claim 2;
(2)	claim 3	a polymer formed by the polymerization of one or more monomers of the formula as defined in claim 3;
(3)	claim 4	a polymer synthesized by reacting hydroxyl-containing polymers with diepoxides;
(4)	claim 5	a polymer synthesized by reacting amine-containing polymers with diepoxides;

Each of the species identified above represents patentably distinct subject matter. In the instant case, those species each involve different structures and modes of action. Therefore, those species involve different patentability and enablement issues.

Applicants are required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 1 is generic.

11. If applicants elect the invention of **Group I**, applicants are required to further elect from the following patentably distinct **Sub-Species A** of the claimed invention:

Art Unit: 1627

<u>SubSpecies A</u>	<u>claim no.</u>	<u>A reagent composition according to claim 1, wherein the reagent comprises:</u>
(5)	claim 3	a polymer formed by the polymerization of one or more monomers of the formula as defined in claim 3, where X is the radical defined on page 37, lines 16-19;
(6)	claim 3	a polymer formed by the polymerization of one or more monomers of the formula as defined in claim 3, where X is the radical defined on page 38, lines 1-4;
(7)	claim 3	a polymer formed by the polymerization of one or more monomers of the formula as defined in claim 3, where X is the radical defined on page 38, lines 5-7;
(8)	claim 3	a polymer formed by the polymerization of one or more monomers of the formula as defined in claim 3, where X is the radical defined on page 38, lines 8-10;

Each of the species identified above represents patentably distinct subject matter. In the instant case, those species each involve different structures and modes of action. Therefore, those species involve different patentability and enablement issues.

Applicants are required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 1 is generic.

12. If applicants elect the invention of **Group II**, applicants are required to further elect from the following patentably distinct **Species B** of the claimed invention:



Art Unit: 1627

<b><u>Species B</u></b>	<b><u>claim no.</u></b>	<b><u>A method according to claim 1, wherein the reagent comprises:</u></b>
(9)	claim 12	a polymer formed by the polymerization of one or more monomers selected from group as defined in claim 12;
(10)	claim 13	a polymer formed by the polymerization of one or more monomers of the formula as defined in claim 13;
(11)	claim 14	a polymer synthesized by reacting hydroxyl-containing polymers with diepoxides;
(15)	claim 15	a polymer synthesized by reacting amine-containing polymers with diepoxides;

Each of the species identified above represents patentably distinct subject matter. In the instant case, those species each involve different structures and modes of action. Therefore, those species involve different patentability and enablement issues.

Applicants are required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 11 is generic.

Art Unit: 1627

13. If applicants elect the invention of **Group II**, applicants are required to further elect from the following patentably distinct **Sub-Species B** of the claimed invention:

<b><u>SubSpecies B</u></b>	<b><u>claim no.</u></b>	<b><u>A reagent composition according to claim 1, wherein the reagent comprises:</u></b>
(16)	claim 13	a polymer formed by the polymerization of one or more monomers of the formula as defined in claim 13, where X is the radical defined on page 40, lines 8-9;
(17)	claim 13	a polymer formed by the polymerization of one or more monomers of the formula as defined in claim 13, where X is the radical defined on page 40, lines 11-12;
(18)	claim 13	a polymer formed by the polymerization of one or more monomers of the formula as defined in claim 13, where X is the radical defined on page 40, lines 13-14;
(19)	claim 13	a polymer formed by the polymerization of one or more monomers of the formula as defined in claim 13, where X is the radical defined on page 40, lines 15-20;

Each of the species identified above represents patentably distinct subject matter. In the instant case, those species each involve different structures and modes of action. Therefore, those species involve different patentability and enablement issues.

Applicants are required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 13 is generic.

Art Unit: 1627

14. If applicants elect the invention of **Group IV**, applicants are required to further elect from the following patentably distinct **Sub-Species C** of the claimed invention:

<b><u>SubSpecies B</u></b>	<b><u>claim no.</u></b>	<b><u>A microarray according to claim 25, wherein the reagent comprises:</u></b>
(16)	claim 28	a polymer formed by the polymerization of one or more monomers of the formula as defined in claim 28, where X is the radical defined on page 43, lines 18-19;
(17)	claim 28	a polymer formed by the polymerization of one or more monomers of the formula as defined in claim 28, where X is the radical defined on page 44, lines 1-4;
(18)	claim 28	a polymer formed by the polymerization of one or more monomers of the formula as defined in claim 28, where X is the radical defined on page 44, lines 5-7;
(19)	claim 28	a polymer formed by the polymerization of one or more monomers of the formula as defined in claim 28, where X is the radical defined on page 44, lines 8-9;

Each of the species identified above represents patentably distinct subject matter. In the instant case, those species each involve different structures and modes of action. Therefore, those species involve different patentability and enablement issues.

Applicants are required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 25 is generic.

Art Unit: 1627

15. Applicants are advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Each of the species identified in claims above represents patentably distinct subject matter. In the instant case, those species each involve different structures and modes of action. Therefore, those species involve different patentability and enablement issues.

**For search purposes, applicants should provide the chemical structure of each of the above-identified species, wherein each of the specific chemical formula substituents of those species are defined either by picture or by expressing the species in terms of the variables of the formula. It is acknowledged that a “library” is by definition a plurality of species. The election is important merely for search purposes only.**

16. Upon the allowance of a generic claim, applicants will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicants must indicate which are readable upon the elected species. MPEP § 809.02(a).

17. Should applicants traverse on the ground that the species are not patentably distinct, applicants should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the

Art Unit: 1627

examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

18. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

*Conclusion*

19. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Grace C. Hsu, Ph.D., J.D. whose telephone number is (703) 308-7005. The Examiner may be reached during normal business hours, Monday through Friday from 8:30 am to 6:00 pm (EST). A message may be left on the Examiner's voice mail.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Jyothsna Venkat, Ph.D., may be reached at (703) 308-2439. The fax number assigned to Group 1627 is (703) 305-4242. Any inquiry of a general nature or relating to the status of this application should be directed to the Group 1627 receptionist whose telephone number is (703) 308-0196.

Grace C. Hsu, Ph.D.  
June 12, 2001

  
**PADMASHRI PONNALURI**  
**PRIMARY EXAMINER**